

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

REC'D 16 NOV 2005

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Applicant's or agent's file reference IJSTL.1	FOR FURTHER ACTION		See Form PCT/PEA/416
International application No. PCT/GB2005/001219	International filing date (day/month/year) 29.03.2005	Priority date (day/month/year) 26.03.2004	
International Patent Classification (IPC) or national classification and IPC E04B5/12, E04B1/26			
Applicant EASY JOIST LIMITED			
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 6 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p style="margin-left: 20px;">a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 11 sheets, as follows:</p> <p style="margin-left: 40px;"><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p style="margin-left: 40px;"><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p style="margin-left: 20px;">b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>			
<p>4. This report contains indications relating to the following items:</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. II Priority</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p style="margin-left: 20px;"><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. VI Certain documents cited</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p style="margin-left: 20px;"><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>			
Date of submission of the demand 08.09.2005		Date of completion of this report 16.11.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016		Authorized Officer Fordham, A Telephone No. +31 70 340-3755	



**INTERNATIONAL PRELIMINARY REPORT
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International application No.
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Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report):*

Description, Pages

6-11	as originally filed
1-5, 5A	filed with telefax on 08.09.2005

Claims, Numbers

35	as originally filed
1-34	filed with telefax on 08.09.2005

Drawings, Sheets

1/2, 2/2	as originally filed
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- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT
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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application,

☒ claims Nos. 34

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 34 are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos.

☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:

the written form

☐ has not been furnished

☐ does not comply with the standard

the computer readable form

☐ has not been furnished

☐ does not comply with the standard

☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-*bis* of the Administrative Instructions.

☐ See separate sheet for further details

**INTERNATIONAL PRELIMINARY REPORT
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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-33
	No: Claims	
Inventive step (IS)	Yes: Claims	1-33
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-33
	No: Claims	

2. Citations and explanations (Rule-70.7):

see separate sheet

1 Re Item III

- 1.1 Claim 34 is an "omnibus" claim of the type considered to infringe Rule 6.2(a) PCT and as such is not clear in the sense of Article 6 PCT.

2 Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

- 2.1 Reference is made to the following document:
D1: GB-A-2 392 928

The document D1 is regarded as being the closest prior art to the subject-matter of claim 1 and shows a joist holder from which the subject-matter of claim 1 differs in that its sleeve is at least partially transparent or semi-transparent.

The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

The problem to be solved by the present invention may be regarded as adapting this closest prior art joist holder such that an indication is given to the user of the extent to which a joist has been inserted into it.

The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

No other available prior art discloses or suggests the use of material which is at least partially transparent or semi-transparent for the sleeve in order as a solution to this problem. Furthermore, although a plastic sleeve fabricated from thin sheet material would in fact be translucent and thus would fall within the scope of the claim, in the absence of such teaching the skilled person would not consider such a sleeve as being suitable for replacing that of the sleeve of the joist holder disclosed in D1 since he would recognise that the intended use of the product requires it to be robust.

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(SEPARATE SHEET)**

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- 2.2 The subject matter of independent claims 22, 29 and 30 in each case includes the differentiating feature mentioned above. Therefore it is novel and considered to involve an inventive step for the reasons set out above.
- 2.3 Claims 2-21, 23-28 and 31-33 all include all of the features of one of the above-mentioned independent claims and as such also meet the requirements of the PCT with respect to novelty and inventive step.

Joist Holder

The present invention relates to a holder for a joist.

Traditionally there have been two ways of mounting joists on walls. One solution is to use a galvanised metal 'hanger' that has the appearance of a triangular box with an anchor portion that extends back across the part of the wall to which the joist is to be connected. These hangers are generally regarded as unsatisfactory because they frequently cause the underlying portion of the wall to crumble and this results in uneven floors. The other conventional method is simply to build the joist into the wall, but recent British building regulations specify that there must be a watertight seal between the joist and the wall as otherwise moisture from the wall can cause the joists to rot. The current common methods of complying with this requirement are either to wrap the joist in damp proof course material or to apply a silicon sealant between the joist and the wall. However, these are considered to be very time-consuming operations and the cost of the silicon sealant is relatively high.

GB-A-2 392 928, GB-A-2 304 352, GB-A-1 564 725 and US-A-2 176 450 disclose various types of sleeves that are intended to be used when mounting joists in walls. None of these documents suggest a joist holder that assists a user with seeing how far into the holder a joist has been inserted.

Embodiments of the present invention are intended to provide an alternative to these existing approaches and reduce or mitigate their associated problems.

According to a first aspect of the present invention there is provided a joist holder including a preformed sleeve of water impermeable material for

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partially encircling an end of the joist for preventing water penetration to the joist end, wherein the sleeve is dimensioned to have a depth approximately equal to a standard building block, the sleeve further including an anchor portion for anchoring to the face of a block work wall, wherein the sleeve is at least partially transparent or semi-transparent.

According to a further aspect of the present invention there is provided a building structure including joists mounted by means of a joist holder substantially as described herein.

According to a further aspect of the present invention there is provided an assembly including a joist and a joist holder substantially as described herein.

The invention may be performed in various ways, and, by way of example only, embodiments thereof will now be described, reference being made to the accompanying drawings, in which:-

Figure 1 is a perspective view of one embodiment of the joist holder;

Figure 2 illustrates schematically the holder mounted in a wall;

Figure 3 illustrates schematically a plan view of another embodiment of the holder being used to mount a joist in a wall, and

Figure 4 illustrates schematically another embodiment of the holder.

Referring to Figure 1, the joist holder 100 comprises a rectangular tubular sleeve 102 with one open end of the sleeve being closed by means of a base plate (indicated at 104). Thus, the holder 100 has the general appearance of a box with one open end that allows access to a cuboid-shaped internal space 106. In some embodiments, the base plate 104 may be a separate component

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that is attached to the end of the joist/sleeve during installation. It will be appreciated that variations to the design shown in Figure 1 can be made, e.g. having curved edges at the corners of the sleeves, the sleeve having tapering walls, and the like.

- 5 The depth of the sleeve 102 can correspond to that of a standard building block or brick. In one example the depth of the sleeve is around 100 millimetres, although it will be appreciated that this dimension could be varied in accordance with any particular construction requirements. Joists come in a range of

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